

Amendments to the Claims

The listing of claims will replace all prior versions of claims in the application:

Claim 1 (currently amended) An isolated polypeptide fragment of an (HCV) helicase protein, which is derived from a subdomain of the HCV NS3 helicase protein, wherein the fragment is less than 30 kDa, structurally sound, soluble, monodisperse, and stable in a buffered solution selected from the polypeptides defined by the amino acid sequence set forth in SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 6, and SEQ ID NO: 17.

Claim 2 (currently amended) A The polypeptide fragment of claim 1, which is suitable for use in nuclear magnetic resonance defined by the amino acid sequence set forth in SEQ ID NO: 17.

Claim 3 (currently amended) A The polypeptide fragment of claim 1, wherein the subdomain comprises amino acids 181 to 324 of the HCV helicase protein defined by the amino acid sequence set forth in SEQ ID NO: 3.

Claim 4 (currently amended) A The polypeptide fragment of claim 3, which comprises a single amino acid substitution, wherein the amino acid selected is from Asp 249 73 and Arg 257 81, and wherein the substitution is a nonpolar amino acid.

Claim 5 (currently amended) A The polypeptide fragment of claim 4, wherein the substitution for Asp 249 73 is lysine or arginine, and wherein the substitution for Arg 257 81 is glutamic acid or aspartic acid.

Claim 6 (cancelled).

Claim 7 (currently amended) A The polypeptide fragment of claim 1, wherein the subdomain comprises amino acids 181 to 481 of the HCV helicase protein, and defined by the amino acid

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sequence set forth in SEQ ID NO: 5, wherein the amino acid residues at positions 431 255 to 451 258 are deleted and replaced by an amino acid sequence selected from SEQ ID NOS: 2, 7, 8, 9, 10, 11, 12, 13, and or 14.

Claim 8 (currently amended) A The polypeptide fragment of claim 1, ~~wherein the subdomain comprises amino acids 181 to 572 of the HCV helicase protein, and wherein the amino acid residues at positions 328 through 482 are deleted~~ defined by the amino acid sequence set forth in SEQ ID NO: 6.

Claim 9 (currently amended) A polypeptide which ~~comprises an amino acid sequence selected from the polypeptides defined by the amino acid sequence set forth in SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, and SEQ ID NO: 6, wherein the polypeptide comprising SEQ ID NO: 3, SEQ ID NO: 5 or SEQ ID NO: 6 optionally which~~ comprises a single amino acid substitution, wherein the amino acid is selected from Asp 249 73 and Arg 257 81, and wherein the substitution is a nonpolar amino acid.

Claim 10 (currently amended) A The polypeptide of claim 1, which is in a complex with a small molecule HCV helicase inhibitor.

Claim 11 (currently amended) A crystalline composition, comprising an isolated polypeptide ~~fragment derived from subdomain I selected from the polypeptides defined by the amino acid sequence set forth in SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 6, and SEQ ID NO: 17.~~

Claim 12 (currently amended) The crystalline composition of claim 11, wherein the polypeptide ~~fragment further is selected from the polypeptides defined by the amino acid sequence set forth in SEQ ID NO: 3, SEQ ID NO: 5, and SEQ ID NO: 6, which~~ comprises a single amino acid substitution, wherein the amino acid selected is from Asp 249 73 and Arg 257 81, and wherein the substitution is a nonpolar amino acid.

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Claim 13 (currently amended) The crystalline composition of claim 12, wherein the substitution for Asp 249 73 is lysine or arginine, and wherein the substitution for Arg 257 81 is glutamic acid or aspartic acid.

Claim 14 (currently amended) The crystalline composition of claim 12, wherein the polypeptide ~~fragment comprises an~~ is defined by the amino acid sequence set forth in ~~of~~ SEQ ID NO: 3.

Claim 15 (currently amended) A crystalline composition comprising an isolated polypeptide described by the structural coordinates set forth in Table 5.

Claim 16 (currently amended) A precipitant solution comprising from 1 to 60 µg of an hepatitis C virus (HCV) helicase fragment selected from the polypeptides defined by the amino acid sequence set forth in SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 17, from 5 to 35% weight to volume of a precipitant compound, from 1 to 1000 mM of a salt, a buffer for a the precipitant solution and optionally a protein stabilizing agent, wherein the pH of the solution is from about 4 to 7 and the temperature is from about 1 to 26°C.

Claim 17 (currently amended) A buffered solution comprising from 50 to 1000 µM of an hepatitis C virus (HCV) helicase fragment selected from the polypeptides defined by the amino acid sequence set forth in SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 6, or SEQ ID NO: 17, from 5 to 15% weight to volume of D₂O, a protease inhibitor, 25 to 250 mM KPO₄, optionally about 25 to 250 mM sodium chloride, optionally about 0.010 to 0.020% sodium azide and 1 to 10 mM DTT, wherein the pH of the solution is from about 4 to 8.